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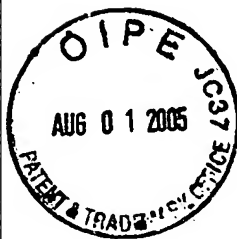


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PATENT APPLICATION
Docket No: 14321.27.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of)
)
Akira Okada et al.)
)
Serial No.: 10/756,561) Art Unit
) 2633
Filed: January 13, 2004)
)
Confirmation No: 3532)
)
For: OPTICAL PACKET ROUTING NETWORK)
SYSTEM BASED ON OPTICAL LABEL)
SWITCHING TECHNIQUE)

TRANSMITTAL FOR AN INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith for filing and pursuant to 37 C.F.R. § 1.97 is a Information Disclosure Statement, which includes the following statements, if any, required variously by 37 C.F.R. § 1.98:

- X Statement of relevance of selected cited references not in the English language which are not translated.
- Statement that selected cited references are substantially cumulative of an enclosed or previously submitted reference.
- Statement that selected cited references were previously cited by or submitted to the United States Patent and Trademark Office in a prior application which is relied upon for an earlier filing date under 35 U.S.C. § 120.

A. Additional Materials Required Due to Content of Information Disclosure Statement

Transmitted are the following documents in addition to the Information Disclosure Statement as required variously under 37 C.F.R. § 1.98:

X Form PTO-1449 listing 27 references submitted for consideration.

X A copy of 20 of the references listed on the Form PTO-1449.

___ English translations of ___ (___) of the references listed on the Form PTO-1449 which are not in the English language.

___ Copies of the following documents from the prosecution of a previous, related application:

___ Form PTO-1449 AND INFORMATION DISCLOSURE STATEMENT;
and

___ Form PTO-892

B. Additional Materials Required Due to Timing of Filing of Information Disclosure Statement

The transmitted Information Disclosure Statement is being filed within one (1) of the following four (4) time periods:

I. X Prior to the later of either three (3) months following the filing date or the mailing of a first Office Action. Accordingly, no materials other than those listed above are enclosed.

II. ___ Following the latter of either three (3) months following the filing date or the mailing of a first Office Action, but before the mailing of a final Office Action or a Notice of Allowance. Accordingly, to secure consideration thereof, one (1) of the following is also enclosed:

___ Promptness Certification; or

___ Check No. _____ in the amount of \$_____ constituting the submission fee set forth in 37 C.F.R. § 1.17(p).

III. ___ After the mailing of a Notice of Allowance, but before payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:

___ Promptness Certificate;

___ Petition for Consideration; and

____ Check No. in the amount of \$ _____ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).

IV. ____ After payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:

____ Petition to Withdraw from Issue; and

____ Check No. _____ in the amount of \$ _____ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).

C. Fees

The Commissioner is hereby authorized to charge payment of or any deficiency in the following fees associated with this communication, or to credit any overpayment thereof, to Deposit Account No. 23-3178. A duplicate copy of this letter is enclosed.

____ Any fee required in relation to filing of this letter or any documents transmitted therewith.

____ The submission fee set forth in 37 C.F.R. § 1.17(p) in the event that 37 C.F.R. § 1.97(c) applies and the Examiner is not satisfied that any Promptness Certificate submitted meets the requirements of 37 C.F.R. § 1.97(e).

____ The submission fee set forth in 37 C.F.R. § 1.17(p).

____ The petition fee set forth in 37 C.F.R. § 1.17(i)(1).

Dated this 28th day of July 2005.

Respectfully submitted,



DANA L. TANGREN
Attorney for Applicant
Registration No. 37,246
Customer No. 022913

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof that is not a US patent document is also enclosed.

Statement of Relevance of References Listed
Unaccompanied by English Translation
Under 37 CFR § 1.98(a)(3)

In accordance with 37 CFR § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

Japanese Application No. 59-036642: The compound of formula I (R is H or 1-10C alkyl; X is F or Cl). EXAMPLE: trans -4-Propyl- trans-4''-(4-fluorobenzoyloxy)-octadecahydro- trans -p-terphenyl. USE: A liquid crystal substance exhibiting a liquid crystal phase over a wide temperature range, having high clear point, and nevertheless, low viscosity and positive dielectric anisotropy. When the compound is used as a compound of a liquid crystal composition, the clear point of the composition can be raised without increasing the viscosity of the composition nor too much affecting the threshold voltage and saturation voltage. PROCESS: The compound of formula I can be prepared by (1) reacting 4-bromoanisole of formula II with metallic Mg, (2) reacting the product with 4-(trans-4'- alkylcyclohexyl) cyclohexanone to obtain the compound of formula III, (3) subjecting the compound successively to dehydration, reduction, demethylation, and reduction, and (4) reacting the resultant compound of formula IV with 4-halogenbenzoic acid chloride.

Japanese Application No. 63 006993 A: PURPOSE: To increase the number of input lines (output lines) while maintaining a low loss in an insertion and a satisfactory cross talk characteristic by selecting and dividing an optical wavelength by the use of wavelength variable laser diode to perform an optical exchange. CONSTITUTION: Optical signals of the different wavelength λ_1 , λ_2 ,...are transmitted through a optical fiber from plural (n) terminals, the (n) pieces of optical signals are inputted in n x n port type optical star couplers 9 having (n) input and output ports output light from the output port is inputted in the wavelength variable laser diode 10, and the output light from the respective laser diodes is transmitted to respective terminals by the use of the optical fibers. The injecting current from the respective laser diodes 10 is controlled by line

Japanese Application No. 01-126095: PURPOSE: To enable the reliability of a switch to be raised without depending on the scale of the switch by converting the aimed address of a information signal to plural light signals of which wavelength are different, superimposing it to the information signal as a light header signal and passing it through the switch. CONSTITUTION: An optical branching circuit 10 outputs the light information signal being equal to the inputted light information signal to an optical multiplexing circuit 12 and a header addition circuit 14. The light information signal outputted by the circuit 10 and a header signal outputted by the circuit 14 are sent to the input terminal 150 or 250 of the 2X2 light switch element constituting the 8X8 switch 500 as a light packet signal after being superimposed by the circuit 12. The circuit 14 converts the aimed address information and timing information to the light header signal constituted by the difference wave length and outputs it to the circuit 12.

Japanese Application No. 05-268268 A: PURPOSE: To hold a high-speed data transmission speed by receiving a multiplexed signal consisting of a data packet signal and a separate header signal and extracting a part of the received multiplexed signal to receiver the header signal. CONSTITUTION: A data packet is multiplexed with a separate header, and they are simultaneously transmitted. The data packet is transmitted on an optical carrier in a fundamental band at a data speed D_b , and the separate header is transmitted on the same optical carrier at a data speed D_h . In this case, the speed D_b is higher than the speed D_h , and preferably, the speed D_b is integer times as high as the speed D_h . A multiplexed signal is sent to an optical receiver, and the data packet is recovered by demultiplexing the extracted signal. The signal is demultiplexed into the separate header and the data packet by an SCM demultiplexer, and the separate header is decoded by a processor, thus, an inexpensive receiver can be used because the header is transmitted at a low data speed.

Japanese Application No. 06-216850: PURPOSE: To provide a method that secures the self-routing in an optical signal state and through an optical switch part of plural stages which performs the switching actions of a packet based on the presence or absence of input of the control light. CONSTITUTION: The characteristics are previously given to a header part 35 and a data part 37 of a packet 33 so that both parts 35 and 37 of different wavelengths are separated from each other. The part 35 consists of the same number of blocks as the number of optical switch stages of an optical switch part S. The control optical information are previously given to these blocks to control the state of each optical switch so that a desired route of the packet 33 is formed at the part S. Then the packet 33 is separated into both parts 35 and 37 by a wavelength filter 43. There separated parts 35 and 37 are sent to the part S so that the coincidence is secured between the time when the part 37 successively arrives at the subsequent optical switches and the time when the blocks received with the control optical information on each optical switch arrive at the control ports of each corresponding optical switch.

Japanese Application No. 06-232843 A: PURPOSE: To simplify an xN optical synthesizer/branching filter conventionally constitute by combining a lot of optical synthesizers/branching filters with the constitution using an xN waveguide type optical synthesizer/branching filter and a variable wavelength light source, to improve the yield, and to select or switch an address for sending optical signals by setting the wavelength of the variable wavelength light source. CONSTITUTION: This optical wave address system is composed of plural variable wavelength semiconductor light sources 1, optical signal processor 2 for performing signal processing to emit light from the variable wavelength light sources 1, array waveguide defraction grating type optical synthesizer/branching filter constituted by forming plural input waveguides spline waveguides 7 and 8, array waveguide defraction grating 9 and plural output waveguides on an optical waveguide substrate so as to respectively output the input signal beams of plural wavelength emitting from the plural variable wavelength light sources 1 from these plural output waveguides 6 corresponding to the respective wavelengths, and plural photodetectors 12 for detecting optical signals outputted from the array waveguide defracting grating type optical synthesizer/branching filter 10.

Japanese Application No. 06-235946 A: PURPOSE: To provide a light self-routing switch executing the self-routing via the light signal itself without converting it into the electrical signal.

CONSTITUTION: The cell light inputted via an in-highway 1 is split into multiple parts by the branch section 2a of a branch wavelength conversion section 2, a wavelength conversion is made based on the tag light at a wavelength conversion section 2b. A wavelength selection section 3 has light filters with different passing wavelength corresponding to an out-highway respectively, and the cell light is sent out via the light filter having the wavelength of the cell light converted with the wavelength by the wavelength conversion section 2b as the passing wavelength. The cell light can be returned to the original wavelength by a wavelength conversion section 4 and sent out to the out-highway.

Japanese Application No. 06-308347 A: PURPOSE: To provide an optical delay line with which variable delay is economically provided. CONSTITUTION: The optical delay line for delaying an optical signal just for the period of selected time is provided with an input wavelength router connected to an output wavelength router by the optical waveguide of a different length. A wavelength shifter coupled to the input of this input wavelength router shifts the wavelength of the received signal to the desired wavelength. While depending on the wavelength of the signal from the wavelength shifter, the received signal is turned toward any specified one of waveguides having different lengths for providing controllable delay. The output wavelength router outputs the optical signals from the various waveguides having different lengths to one common output waveguide.

Japanese Application No. 7-507188: A telecommunications system comprises first and second nodes (4, 5, 6 and 1) interconnected by a network transmission line (2). The first node comprises an optical data generator (4) for producing an optical data signal (4a) at a first wavelength, an optical header generator (5) for producing an optical control (header) signal (5a) at a second wavelength, and means (6) for multiplexing the data and control signals onto the transmission line (2). The second node (1) comprises a switch (8) and a controller (14) responsive to signals at the second wavelength for controlling the routing of optical signals through the switch. A delay unit (24) and associated control means (22, 23) are provided to ensure that a sufficient delay occurs between the transmission start times of the control and data signals (5a and 4a) that the control signal completely overlaps the data signal at the second node.

Japanese Application No. 08-195732 A: PURPOSE: To demultiplex lots of channels altogether by using a first optical circuit to process an optical short pulse and a wavelength multiplexed light and using a second optical circuit to process a signal light subject to multiplexing and demultiplexing and a control light outputted from a diffusion circuit thereby branching a wavelength conversion light for each wavelength. CONSTITUTION: An optical short pulse light source 11 outputs an optical short pulse train (b) whose wavelength is λ_p and a multi wavelength light source 1 applies wavelength multiplex to a continuous light whose wavelengths are λ_1 - λ_n to provide an output of wavelength multiple light (c). An optical circuit 13 receives the pulse train (b) and the multiplex light (c) to provide an output of a wavelength multiple optical short pulse train (d). The pulse train (d) is inputted to an optical fiber 14, in which the pulse train is converted into a control light (e) arranged on time base depending on the wavelengths λ_1 - λ_n . An optical circuit 15 receives the signal light (a) and the control light (e) whose wavelength is λ_s to output a wavelength conversion light (f) of each channel whose wavelength is converted into the wavelengths λ_1 - λ_n . The conversion light (f) is given to an optical branching device 16, in which the

light is branched into a multiplexer demultiplex output light (g) corresponding to each wavelength. Thus the wavelength of the signal light is converted into wavelength different from each channel.

Japanese Application No. 08-237266 A: PURPOSE: To shorten fiber delay line length to realize a small system as much as possible in an optical buffer memory used for an optical ATM exchange system or a optical STM exchange system. CONSTITUTION: Optical cells or time slots which are wavelength-selected by a filter are reflected on a reflector through m-1-pieces of fiber delay lines cell time slots and they are sequentially inputted/outputted one by one or they are delayed through the fiber delay lines having length delaying them by one optical cell time slot for respectively outputs which are made to pass through by peculiar transmission wavelength by filters and x1 couplers different in branching ratios and they are synthesized by the 1x2 couplers.

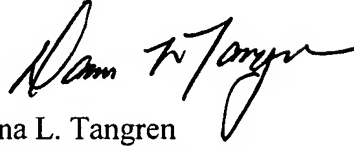
Japanese Application No. 09-074423: PROBLEM TO BE SOLVED: To improve the data transfer capability of a path and to obtain an equipment configured inexpensively by providing a physical optical data transfer path and a path control wire not in contention on the path. SOLUTION: Plural nodes 501, 502, 503 are connected to a bus 2001 and signals generated in the nodes 501, 503 are time-multiplexed by circuits 1, 2, 3 and inputted to transmitters 11, 12, 13. Outputs of the transmitters 11, 12, 13 are connected to switches 21, 22, 23 formed by integrating a branching filter 151 and a gate 152 and also to arrays 31, 32, 33. The arrays are respectively bundled and concentrated by line concentrators 41, 42, 43, and the output of the line concentrator 41 is connected to a receiver 51 of the node 501 via a fiber 601 and the output of the line concentrator 42 is connected to a receiver 52 of the node 502 via a fiber 602.

Japanese Application No. 11-27707 A: PROBLEM TO BE SOLVED: To provide a small-volume mounting, low cost optical communication network system with a comparatively small scale configuration. SOLUTION: This optical communication network node system is provided with input terminals 111-11n, 1: optical branching devices 121-12n, a passing-by optical switching circuit 101, 2:1 photocouplers 151-15n, output terminals 171-17n, a drop optical switching circuit 102 output interfaces 12-1-13-mn, input interfaces 12-1-14-mn, and an inserting optical switching circuit 103. Since various optical switching circuits are separated and only a required switching state is supported, the number of useless optical switching elements are reduced.

French Patent No. 2 709 839: The present invention relates to a switch for switching optical signals which are in the form of optical packets consisting of a routing address and of a useful message, characterized in that it includes: splitting means (10) capable of splitting the optical signals, received at the input, into two beams (one beam containing at least the routing address and one beam containing at least the useful message) wavelength conversion means (20) capable of modifying the wavelength of the beam containing the useful message, depending on the split-off routing address, and wavelength-sensitive passive routing means (30) which receive the beam containing the useful message emanating from the conversion means (20).

Dated this 28th day of July 2005.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dana L. Tangren", with a stylized, flowing script.

Dana L. Tangren
Attorney for Applicant
Registration No. 37,246
Customer No. 022913

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Applicant: Akira Okada et al.

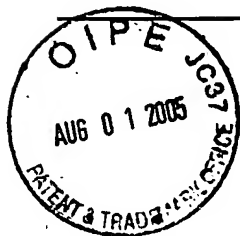
Confirmation No.: 3532

Serial No.: 10/756,561

Att'y Docket No.: 14321.27.1

Filing Date: January 13, 2004

Art Unit: 2633

For: OPTICAL PACKET ROUTING NETWORK SYSTEM BASED ON OPTICAL LABEL
SWITCHING TECHNIQUEINFORMATION DISCLOSURE CITATIONS MADE BY APPLICANTU.S. Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Issue Date</u>	<u>Name</u>
___ 1	5,175,777	12/29/1992	Böttle
___ 2	5,319,484	06/07/1994	Jacob et al.
___ 3	5,341,234	08/23/1994	Suzuki et al.
___ 4	5,488,501	01/30/1996	Barnsley
___ 5	5,504,607	04/02/1996	Smith et al.
___ 6	5,617,233	04/01/1997	Boncek
___ 7	6,433,902 B1	08/13/2002	Chiaroni et al.

Foreign Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Publication Date</u>	<u>Country or Patent Office</u>	<u>Translation</u>
___ 8	0 494 831 A2	07/15/1992	EPO	N/A
___ 9	0 223 258 A2	05/27/1987	EPO	N/A
___ 10	2 709 839	03/17/1995	France	No
___ 11	59-036642	02/28/1984	Japan	No
___ 12	63-006993 A	01/12/1988	Japan	No
___ 13	01-126095	05/18/1989	Japan	No
___ 14	05-268268 A	10/15/1993	Japan	No
___ 15	06-216850	08/05/1994	Japan	No
___ 16	06-232843 A	08/19/1994	Japan	No

Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant: Akira Okada et al.

Confirmation No.: 3532

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Filing Date: January 13, 2004

Art Unit: 2633

For: OPTICAL PACKET ROUTING NETWORK SYSTEM BASED ON OPTICAL LABEL
SWITCHING TECHNIQUE

_____ 17	06-235946 A	08/23/1994	Japan	No
_____ 18	06-308347 A	11/04/1994	Japan	No
_____ 19	7-507188	03/08/1995	Japan	Yes
_____ 20	WO 93/21706	10/28/1993	PCT	N/A
_____ 21	08-195732 A	07/30/1996	Japan	No
_____ 22	08-237266 A	09/13/1996	Japan	No
_____ 23	09-074423	09/18/1997	Japan	No
_____ 24	11-27707 A	01/29/1999	Japan	No

Other Documents

(including author, title, pertinent pages, etc.)

Examiner

Initial*

_____ 25	D.J. Blumenthal et al., <i>First Demonstration of Multihop All-Optical Packet Switching</i> , IEEE Photonics Technology Letters, Vol. 6, No. 3, pp. 457-460, March 1994.
_____ 26	A. Carena, et al., <i>OPERA: An Optical Packet Experimental Routing Architecture with Label Swapping Capability</i> , Journal of Lightwave Technology, Vol. 16, No. 12, pp. 2135-2145, December 1998.
_____ 27	K. Kato et al., <i>32x32 Full-mesh (1024 path) Wavelength-routing WDM Network Based on Uniform-loss Cyclic-frequency Arrayed-waveguide Grating</i> , Electronics Letters, Vol. 36, No. 15, pp. 1294-1295, July 20, 2000.

Examiner:

Date Considered:

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For: OPTICAL PACKET ROUTING NETWORK SYSTEM BASED ON OPTICAL LABEL
SWITCHING TECHNIQUE

References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

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Examiner:

Date Considered:

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



PATENT APPLICATION

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For: OPTICAL PACKET ROUTING NETWORK)
SYSTEM BASED ON OPTICAL LABEL)
SWITCHING TECHNIQUE)

CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

I hereby certify that the following documents are being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the 28th day of July 2005.

- Transmittal for Information Disclosure Statement (3 pages) (in duplicate)
- Information Disclosure Statement (6 pages)
- Form PTO-1449 listing 27 references (3 pages)
- A copy of 20 reference listed on the Form PTO-1449

Respectfully submitted,

DANA L. TANGREN
Attorney for Applicant
Registration No. 37,246
Customer No. 022913

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